B5 Page 9, before claim 1, insert --It is claimed:--.

IN THE CLAIMS

Cancel claims 17-31 without prejudice, and add the following new claims:

~~33.~~ 1 An infrared radiator comprising

a heating element, said heating element having ends and comprising a quartz glass tube having carbon fibers arranged therein, said ends of said heating element joined to contact elements running through a wall of the quartz glass tube, said heating element being positioned away from the wall of said quartz glass tube; the heating element being centered on the axis of the quartz glass tube by means of at least one spacer, wherein ~~the ceramic~~ a ceramic material is arranged between said heating element and said at least one spacer.

19 ~~34~~ 33 An infrared radiator comprising:

a heating element, said heating element comprising a quartz glass tube having a wall and having carbon fibers arranged therein, said ends of the heating element joined to contact elements running through the wall of said quartz glass tube, the heating element being spaced away from the wall of the quartz glass tube, and wherein the heating element is centered on the axis of the quartz glass tube by spacers, said spacers comprising a metal oxide selected from the group consisting of aluminum oxide and zirconium dioxide.

~~35.~~ 2 An infrared radiator according to claim ~~33~~ 1, wherein the heating element has the form of a spiral or coiled ribbon.

19 ~~34~~ 33

20 ~~36.~~ 3 An infrared radiator according to claim ~~34~~, wherein the heating element has the form of a spiral or coiled ribbon.

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~~37.~~ 4 An infrared radiator according to claim ~~35~~, wherein the inside diameter of the quartz glass tube is at least 1.5 times as great as the diameter of the spirals or coils of the heating element.

~~38.~~ An infrared radiator according to claim ~~36~~, wherein the inside diameter of the quartz glass tube is at least 1.5 times as great as the diameter of the spirals or coils of the heating element.

~~39.~~ An infrared radiator according to claim ~~33~~, wherein the spacers comprises at least one metal selected from the group consisting of molybdenum, tungsten and tantalum, or an alloy of these metals.

~~40.~~ An infrared radiator according to claim ~~33~~, wherein the spacers have, at least on their side facing the heating element, a length in the longitudinal direction of the heating element such that it is greater than the spaces formed in this longitudinal direction between the coils of the heating element.

~~41.~~ An infrared radiator according to claim ~~34~~, wherein the spacers have, at least on their side facing the heating element, a length in the longitudinal direction of the heating element such that it is greater than the spaces formed in this longitudinal direction between the coils of the heating element.

~~42.~~ An infrared radiator according to claim ~~33~~, wherein the ceramic is selected from the group consisting of aluminum oxide and zirconium dioxide.

~~43.~~ An infrared radiator according to claim ~~33~~, wherein the contact elements are formed of resilient material at their ends and joined to the heating element.

~~44.~~ An infrared radiator according to claim ~~34~~, wherein the contact elements are formed of resilient material at their ends and joined to the heating element.

~~45.~~ An infrared radiator according to claim ~~42~~, wherein the resilient material is formed of molybdenum.

45. An infrared radiator according to claim 44, wherein the resilient material is formed of molybdenum.

46. An infrared radiator according to claim 33, wherein the ends of the contact elements which are joined to the heating element are in the form of sleeves clutching the ends of the heating element.

47. An infrared radiator according to claim 34, wherein the ends of the contact elements which are joined to the heating element are in the form of sleeves clutching the ends of the heating element.

48. An infrared radiator according to claim 46, wherein the sleeves are formed of molybdenum.

49. An infrared radiator according to claim 47, wherein the sleeves are formed of molybdenum.

50. An infrared radiator according to claim 33, wherein graphite is disposed between the ends of the heating element and the contact elements.

51. An infrared radiator according to claim 34, wherein graphite is disposed between the ends of the heating element and the contact elements.

~~52. An infrared radiator according to claim 50, wherein the graphite is a graphite paper.~~

~~53. An infrared radiator according to claim 52, wherein the graphite is a graphite paper.~~

54. An infrared radiator according to claim 52, wherein at least one of a noble metal paste or a metallic coating applied to the ends of the heating element is placed between the graphite and the heating element.

55. An infrared radiator according to claim 53, wherein a noble metal paste and/or a metallic coating applied to the ends of the heating element is placed between the graphite and the heating element.

56. An infrared radiator according to claim 54, wherein the metallic coating is formed of nickel or a noble metal.

57. An infrared radiator according to claim 55, wherein the metallic coating is formed of nickel or a noble metal.

58. An infrared radiator according to claim 54, wherein the metallic coating is applied galvanically.

59. An infrared radiator according to claim 55, wherein the metallic coating is applied galvanically.

60. An infrared radiator according to claim 33, wherein contact making parts are joined to one another by means of resistance welding or laser welding.

61. An infrared radiator according to claim 34, wherein contact making parts are joined to one another by means of resistance welding or laser welding.

62. A method for operating an infrared radiator according to claim 33, comprising heating said heating element to a temperature greater than 1000°C.

63. A method for operating an infrared radiator according to claim 34, comprising heating said heating element to a temperature greater than 1000°C.

64. A method for operating an infrared radiator according to claim 62, wherein the heating element is heating to a temperature greater than 1500°C.

65. A method for operating an infrared radiator according to claim 63, wherein the heating element is heating to a temperature greater than 1500°C.